CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/CEMENT/2017-18 Date: 04.05.2017

TEST REPORT ON CEMENT

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of Work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	Cement
Sample Received on	:	02.05.2017
Period of Testing	:	02.05.2017 to 04.05.2017

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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T-2377

Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/SAND-Gradation/2017-18

04.05.2017

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: Mr. K. Baskar, No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of Work	: Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	: EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	: Fine Aggregates
Technical Reference	: IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	: 02.05.2017
Date of Testing	: 04.05.2017

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.40	90-100	90-100	90-100	95-100
2.36	77.40	60-95	75-100	85-100	95-100
1.18	51.40	30-70	55-90	75-100	90-100
600 Micron	21.20	15-34	35-59	60-79	80-100
300 Micron	12.00	5-20	8-30	12-40	15-50
150 Micron	4.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Civil-Tech Consultants & Engineers Bangalore

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Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/AGG/GR/2017-18

04.05.2017

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of Work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	Coarse Aggregates (40mm)
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	02.05.2017
Date of Testing	:	04.05.2017

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.40	95-100	85-100
20	36.00	30-70	0-20
10	15.60	10-35	0-5
4.75	3.10	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/KB/W.No.01/Steel/2017-18

06.05.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Samples ID	:	10 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	06.05.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	10	0.62	511	513	13.15	OK	OK

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No : CTCE/BBMP/KB/W.No.01/Steel/2017-18

06.05.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Samples ID	:	12 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	06.05.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	12	0.89	514	516	13.25	O.K	O.K

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T-2377

Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/Cube/2017-18

17.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of the work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	7^{th} day
Sample Received on	:	17.05.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.05.2017	17.05.2017	8.129	328.3	14.59
2	10.05.2017	17.05.2017	8.229	330.6	14.69
3	10.05.2017	17.05.2017	8.305	346.3	15.39

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T-2377

Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/Cube/2017-18 17.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of the work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	7^{th} day
Sample Received on	:	17.05.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.05.2017	17.05.2017	8.125	339.6	15.09
2	10.05.2017	17.05.2017	8.206	346.8	15.41
3	10.05.2017	17.05.2017	8.358	361.8	16.08

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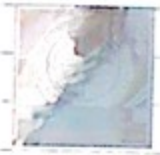
Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/Cube/2017-18 19.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of the work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	7^{th} day
Sample Received on	:	19.05.2017



Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.05.2017	19.05.2017	8.208	333.6	14.83
2	12.05.2017	19.05.2017	8.335	342.8	15.24
3	12.05.2017	19.05.2017	8.415	351.5	15.62

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19.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of the work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	7^{th} day
Sample Received on	:	19.05.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.05.2017	19.05.2017	8.165	322.8	14.35
2	12.05.2017	19.05.2017	8.299	335.4	14.91
3	12.05.2017	19.05.2017	8.382	342.4	15.22

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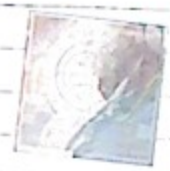
T-2377

Job No.: CTCE/BBMP/KB/W.No.01/CSR-05/325d/Pre Slab/2017-18

18.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CORE

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Baskar,** No.273, Sumangali Seve Ashrama Road, Hebbal, Bangalore.
* Name of work	:	Construction of Drain at Gandhinagara opposite to MEC school in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)/E-PMT-08/W.O/26/2017-18 Dated: 02.05.2017
* Sample ID	:	Precast slab
* Grade of Concrete	:	M_{15}
Techinical Reference	:	IS:516-1959 (RA- 2013), SP-24:1983.
Sample Received on	:	13.05.2017
Date of Testing	:	18.05.2017



Sl. No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	78.00	0.385	2513.83	1.56	0.952	23.65	12.04	13.01	13.66	17.07
2	50.00	79.00	0.392	2527.14	1.58	0.955	24.60	12.53	13.53	12.92	16.15
3	50.00	80.00	0.402	2559.21	1.60	0.957	25.90	13.19	14.25	13.63	17.04

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